

(No. 7852.)

"SARVISTAN" (S.S.).

REPORT OF THE MARINE COURT OF INQUIRY
APPOINTED TO INVESTIGATE THE CIR-
CUMSTANCES ATTENDING THE ACCIDENT
TO THE S.S. "SARVISTAN" OF HONG
KONG.

Chief Presidency Magistrate's Court,
Bombay,
30th August, 1927.

Pursuant to Government Resolution No. 783-1328, dated the 19th August, 1927, Marine Department, Bombay, appointing Mr. H. P. Dastur, Acting Chief Presidency Magistrate, Bombay, Captain Lionel Arthur Beytagh, Master s.s. "Chakla," and Mr. Burns Crosbie Sharpe, Assistant Mechanical Superintendent, Bombay Port Trust Workshops, Mazagaon, to conduct an inquiry into the circumstances attending the accident at Sea to s.s. "Sarvistan," the Court assembled on the 24th, 25th and 26th day of August, 1927, for the purpose stated.

Mr. G. L. Walker, Solicitor to Government, appeared as representative of Local Government.

Mr. F. J. Patel, Barrister-at-Law, appeared on behalf of the Agents and Master of the s.s. "Sarvistan," with Mr. Pereira, of Messrs. Pereira & Co., Solicitors, High Court.

Chief and Second Engineers appeared in person.

The parties were asked if copies of the questions raised and the statement of the case have been furnished to them, and they admitted they had received the same.

As it appeared that this investigation was likely to involve the consideration of the question as to the cancellation or suspension of a certificate or certificates, the Court, under Section 254 of Act 21 of 1923, constituted as its Assessors Mr. Alston John Muir, Superintending Engineer, B.I.S.N. Company, Limited, and Mr. George Batton Shuttleworth Roberts, Chief Engineer, s.s. "Barala."

The parties had no objection to the above Assessors.

The s.s. "Sarvistan," a steel twin screw steamer of about 7,714 tons gross, built at Bremerhaven in 1899 and named the "Frankfort," belongs to the Oriental Navigation Company, the Agents of which are H. M. H. Nemaze & Co. She has two double ended boilers and two single ended boilers, triple expansion and surface condensing. She has four feed pumps, viz., two main and two auxiliary pumps. Her Port of Registry is Hong Kong and a machinery certificate M.B.S. has been assigned to the engines and boilers by the British Corporation for the Survey and Registry of Shipping. She is a pilgrim ship authorised to carry 1,605 pilgrims. She came from Jeddah to Bombay to take pilgrims to Jeddah. She arrived here on 28th June and she sailed from Bombay on 2nd July.

Her Master, James Barker Struth, holds the Board of Trade Master's Certificate No. 00826. The Chief Engineer, Herbert Lawton, holds a Board of Trade First Class Engineer's Certificate No. 39817. The Second Engineer, Agenor George Emmanuel Raffin, holds a First Class Engineer's Certificate No. 136 given by the Marine Board of Examiners at Calcutta on 12th May, 1909.

On the previous voyage one Young was the Chief Engineer and Lawton was the Second Engineer. Calonel was the Third while the Fourth and Fifth Engineers were Chinese.

Young left on the 1st of July and Calonel and two Chinese Engineers left on 30th June. Accordingly, Lawton, who was the Second Engineer was made the Chief Engineer, and Raffin, DeSouza, Wilde, and Samchet signed on as second, third, fourth and fifth engineers respectively. That was on the 1st of July.

All the 4 feed pumps were inefficient and trouble started soon after they left the harbour.

The first trouble experienced was with regard to the bilges. That was soon put right. Owing to the inefficiency of the feed pumps boiler water began to go down gradually. They had an extra feed for 4½ hours on the first day of her voyage and the water showed half glass. On the 5th July the Auxiliary Weir Pump broke down and on the 6th a test cock blew off and a hole was found in the main feed valve discharge chest. On the 7th there was trouble with the L. P. piston rod which got bent. They tried to run compound but they could not do so. At 11.30 p.m. on that day it was discovered that the piston rod was broken and the engine had to be stopped. The control tank began to leak and the boilers were also more or less leaking all the time. The water began to get dangerously low and showed an inch or an inch and a-half in the after glass and none in the forward. Only when she was on an even keel or when the ship rolled it could be seen just above the nuts.

On the 8th the port boiler had to be shut down, and on the 9th the starboard engine gave trouble. Several tubes were expanded. But the leakage from the boilers and float tank continued. She was often out of control and some times she was drifting and the combustion chamber tops got buckled through lack of water. Matters grew worse on the 10th and all the fires of all the boilers had to be drawn. On the 11th they started coming back to Bombay. She had trouble with the boilers all the time. On the afternoon of the 14th she was again out of control; on the 15th at 6-12 a.m. the starboard engine was working but at 10-25 a.m. it stopped again. The boilers leaked badly and at 5-45 p.m. the main steam pipe joint blew out. At 10-50 p.m. all boilers and the dynamo were closed down. From the 16th she remained out of control. At 7 p.m. the Master wirelessed to the Port Officer for assistance. The R.M.S. "Cornwallis" was despatched and she stood by her from the morning of the 17th. She eventually came to Bombay on the 19th.

The ship was surveyed by Commander Horley, R.I.M., on the 26th July and it was noticed that the L. P. piston rod of the port main engine was broken off short at the large end of the taper for piston. The rod was found badly flawed for about two-thirds of the area. The combustion chamber crowns of all boilers showed distinct signs of over-heating, the plates were buckled and the landings and stays strained. A number of tubes appeared to be leaking and several old cracks in the back ends, which were welded previously, gave out, apparently due to the straining set up by over-heating. He attributes the cause of the defects he noticed to over-heating of the combustion chamber crowns due to a general shortage of water.

The above facts do not appear to be in dispute. It is quite evident that the feed pumps were inefficient and the condition of the boilers was defective when the vessel left Bombay though they were not of such a nature as to prevent the vessel from proceeding to sea. Neither the Master nor the Agents were informed or aware of these defects.

It has to be observed that the vessel had been surveyed only in February last and that she had just come from Jeddah and on that voyage she did not experience any serious trouble. Exhibit No. 1 is a report made by the then Chief Engineer Young to the Master. The report shows that only petty repairs were made to tubes and on one or two occasions there were leaks in the centre boilers which, however, were soon put right. The condition of the machinery and boilers is described by Young as O.K. Even the letter, Exhibit E, written by Young from Jeddah to the Master, but which the Master says he received after Young left, says that the engine and boilers were in good working condition and that he would see that everything

was O.K. before he left. Neither the Master nor the Agents were informed by anyone of the defects in the feed pumps or in the boilers and they would have no reason to believe that the vessel was not in a fit condition to proceed on the voyage. The trouble no doubt started on the very day they left. But the Captain was never informed of it. The Chief Engineer does say that he used to make verbal reports every day. He, however, failed to inform the Captain of the exact nature of the trouble they were experiencing below.

In his evidence the Chief Engineer says "When I became the Chief Engineer I knew that the feed pumps were not in as good a condition as they ought to be but I thought we could keep her getting along. I did not think it necessary to report this either to the Captain or to the Agents."

Even when the trouble became worse and there was shortage of water he did not inform the Captain of it. Up to the 6th he himself did not seem to treat the matter seriously or realise the gravity of the trouble. He says "The condition of the boilers was that they were more or less leaking all this time. I then thought that the boilers were all dirty and that was the main cause of the leaks. It did not occur to me that there was shortage of water." The first time he suggested to the Captain to return to Bombay was on the 8th. He says "I did not suggest to the Captain before the 8th that we should return to Bombay."

The Second Engineer says that on the 6th he suggested to the Captain that they should turn back. The Captain denies it. The Captain struck us as a very honest witness, who has nothing to conceal and answered all questions without hesitation. The demeanour of the Second Engineer on the other hand was halting and such as not to inspire any confidence. In our opinion he is an absolutely unreliable witness and he is contradicted by himself and by other witnesses in most material particulars. According to him the trouble was not at all serious and he denies that the level of the water was dangerously low. If that be so there would be no occasion for him to suggest to the Captain that they should turn back.

We hold that the Captain was first informed about the seriousness of the trouble on the 8th and that by the Chief Engineer. What he was told appears from the first telegram sent by him to the Agents. In it he says "Port engine low pressure piston rod severely bent, at present running that engine out of action. Tubes in all boilers leaking very badly. One valve (meaning the test cock) blew off boiler. Two bilge pipes one sanitary pipe fractured owing to bad weather. Must go to Aden for repairs, very serious."

He was not told anything about the shortage of water nor of the buckling of the combustion chamber crown.

On the 9th he wirelessed: "Port L. P. piston rod broken off piston head. At present dismantling engine to run compound. Boiler tubes leaking very badly. We are 730 miles Bombay and 900 miles Aden. Doing nothing against monsoon only drifting. Very advisable to return Bombay. All of the engine room need repairs. What do you advise."

On the 12th he wirelessed "Must return Bombay, port engine quite useless. Can do nothing with it. Steaming starboard engine. Chief says boiler pumps require overhaul . . . making Bombay, will require tug, ship unmanageable."

The Agents sent the tug "Rose," but it missed the ship. Eventually as stated above the vessel arrived here on 19th doing three and sometimes 1½ knots per hour.

We are of opinion that no blame of any kind attaches to the Captain and that neither the Captain nor the Agents were informed about the defective condition of the feed pumps or of the boilers before the vessel proceeded to sea.

From what has been stated above it is evident that there was shortage of water and that the level

of the water gradually got low, due to the defects in the pumps and in the boilers.

We agree with the assessors and hold that the defects in the feed pumps and in the boilers were known to the Chief Engineer. He joined the ship in March last at Singapore as Second Engineer. He admits that the boilers and the feed pumps were not in first class condition and ever since he joined they always had trouble with the main tube, pumps and boiler tubes. And he further says "When I became the Chief Engineer I knew that the feed pumps were not in as good condition as they ought to be but I thought we would keep getting her along. I did not think it necessary to report this to the Captain or to the Agents." The result of these defects was that on the very first day they had extra feed for 4½ hours due to a leakage in the float tank and a burst of the feed pipes joint.

It is unnecessary for us to go into details as to the nature and kind of trouble they had between the 4th and 11th of July. We have already set it out above and it is admitted that the level of the water was gradually getting dangerously low. The Chief Engineer, as well as the Second Engineer were well aware of it.

The third Engineer, DeSouza, says that the water just showed in the after glass and nothing in the forward glass. He blew the forward glass but got no water. They had the ash pump working on the boilers. He reported to the Chief Engineer that he could not keep the water level. He was afraid of the low level. He thought it dangerous to go on in his watches. He would have drawn the fires if he were the Chief. But neither the Chief nor the Second Engineer did so.

The Fourth Engineer, too, says that they were able to keep water one or one and a half inches in the after glass but nothing in the forward glass. He says, "When the vessel was on even keel we were able to show one or one and a half inches. It is correct to say that after the 2nd day (of the voyage) the water was just showing. It was not always showing."

In spite of this the Chief Engineer says he thought it was safe to continue steaming. He says that he did not consider that the water was dangerously low. He admits no water showed in the glass at times. "After the 7th, leaks developed and we got from bad to worse, sometimes we saw the water only when the ship rolled." And yet he did not inform the Captain about it. Damage to the combustion chamber tops was reported to him on the 8th. "Our tops," he says, "were all buckled up. The combustion chamber was slightly distorted. The cause of distortion was perhaps due to shortage of water owing to heating. At that time I had no idea what caused the distortion. If there was no water in the glass one could not tell what was wrong with the combustion chamber tops." It was only when the matters got worse on the 10th that all the fires of all the boilers were drawn. He admits that if he had drawn all the fires on the 8th this damage (i.e., the buckling of the combustion tops) would not have occurred. And he says they used 700 tons of fresh water. He cannot say how much salt water was used.

The discipline too was not good. On the night of the 7th at 11.35 p.m. the port engine stopped. The telegraph was put to stop at 11.35 but the Master did not know anything about it till he was informed the next morning at 6 a.m. by the Chief Officer. When the Chief Engineer was questioned by the First Officer whether he had informed the Master he says he had not but he was going to report. It was the third officer's watch and we think the third officer's conduct was blameworthy. The Chief Engineer as well as the second and third officers all failed in their duties in not informing the Master.

As to the Second Engineer, we find on the evidence that he was not in a fit condition when he joined the ship and that he was incompetent.

He admits that he was not perfectly fit when he joined. He had been suffering from a rheumatic knee but he thought he was justified in taking up the duty as he was on the way to recovery. He knew that the job of the Second Engineer was a strenuous one and that he was the most hard-worked man on the ship.

DeSouza says that the Second Engineer was not well acquainted with the engine room and the connections. DeSouza used to relieve him during his meal time and he found on two or three occasions the wrong suction connections were being used and the pump drawing air. On most occasions when he took over from the Second Engineer at meal time he found water in the glass just about an inch. The Chief Engineer says that he too found wrong suction valves opened. This happened twice or thrice.

The Second Engineer admits that he did not take the density till the 12th and that he found the water dangerously low and yet he did not have the fires drawn. When questioned about it he says he could not do so without the orders of the Chief Engineer, though the risk of not doing so might be that the combustion chamber crowns would have collapsed. If combustion chamber collapsed he knew that the ship would have been blown up. He discovered the buckling of the port boiler combustion chamber on the 8th and yet he gave no orders to have the fires drawn. Though he admits it was his duty to get first-hand information of the actual damage, he only went into the back end of the centre boiler once, and that on the 11th. From the 6th to the 10th the trouble grew more and more serious, and it was the worst on the 10th. He attributes his not going into the back end of the boilers to his rheumatic knee. This is a lame excuse, for he admits he used to go up on deck and down the stokehold every day. Only on the 7th and 8th he

was put in bed by the Surgeon of the ship, as he complained that his other knee was also painful.

We therefore agree with the assessors and hold that the cause of the damage was due to the wrongful act and culpable negligence and default of the Chief and Second Engineers, and that it was attendant with grave risk to life.

Taking into consideration the length of service put in by the Chief Engineer we are of opinion that his Certificate of a First Class Engineer should be suspended for a period of 12 months, during which period we would recommend to Government that he should be given a Second Class Engineer's Certificate.

As to the Second Engineer, we find him absolutely incompetent, and we consider it to be a menace to the life of others to allow him to hold a First Class Engineer's Certificate. We are therefore of opinion that his Certificate as a First Class Engineer should be permanently taken away and that he be given only a Certificate of a Second Class Engineer.

Before we conclude we would recommend to Government the advisability of having at least six Engineers and one boiler maker on ships of the class of s.s. "Sarvistan," which are authorised to carry more than a thousand pilgrims, so that the Engineers may work in watches of two at a time.

H. P. DASTUR,
Acting Chief Presidency Magistrate,
Bombay.

A. A. BEYTAGH,
Master, s.s. "Chakla."

B. C. SHARPE,
Assistant Mechanical Superintendent,
Bombay Port Trust Workshops,
Bombay.

Questions.

1. What was the condition of the feed pumps and boilers of the s.s. "Sarvistan" when the vessel left Bombay? Were they in a fit condition to proceed to sea?

2. Was (a) any report upon the condition of the feed pumps or boilers made by the Chief Engineer to the Master or Agent before the vessel left Bombay and (b) if not should a report have been made?

3. Was the level of the water in the boilers on the 4th, 5th, 6th, 7th, 8th, 9th, and 10th days of July respectively a safe level?

4. If damage occurred, upon what date or dates?

5. What was the cause of such damage?

6. Was the damage due to wrongful act, negligence or want of care on the part of the Agent or Master or Chief Engineer or Second Engineer or all of these?

7. Was the damage material?

8. Was there any risk to life?

Mr. Walker wishes to add the following questions as regards the Master:—

9. Was it brought to the notice of the Master that the feed pumps were inefficient and that it was dangerous to keep the fires doing on the 6th of July or any subsequent date?

10. (a) Was it a wrongful act, default or lack of good seamanship on his part not to return to Bombay when the L. P. piston rod of the port engine broke on the 7th July, or

(b) When he was informed of the condition of the feed pumps?

(c) Did such act or omission cause or conduce to the damage?

In our opinion the condition of the feed pumps and boilers was defective when the vessel left Bombay. We are of opinion that these defects were not of such a nature as to prevent the vessel from proceeding to sea.

(a) No.

(b) Yes. A report should have been made.

No.

We are of opinion that the damage to the boilers was caused from 4th to 10th July.

Shortage of water.

We are of opinion that it was due to the negligence and want of due care on the part of Chief and Second Engineers.

Yes.

Yes.

No.

(a) No.

(b) When he was informed he did return.

(c) No.

With regard to the Chief Engineer:—

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|--|------|
| 11. Was the Chief Engineer aware that the feed pumps were in a defective condition prior to sailing from Bombay on 2nd July? | Yes. |
| 12. If so was it an act of neglect or default not to represent the same to the Master or Agents, s.s. "Sarvistan"? | Yes. |
| 13. Did the Chief Engineer order or permit fires to be kept under the boilers when the level of the water in the boilers was known to be such as to render it imperative that the fires should be drawn? | Yes. |
| 14. If so was this an act of neglect or default on the part of the Chief Engineer? | Yes. |
| 15. Did such acts of neglect or default mentioned in the three preceding questions cause or conduce to the damage? | Yes. |

As regards Second Engineer:—

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| 16. (a) Was the Second Engineer physically capable of performing his duties on joining the ship? | (a) No. |
| (b) Did he remain so throughout the voyage? | (b) Yes. Except on the 7th and 8th July. |
| 17. Did the Second Engineer properly perform his duties as Second Engineer and on watch during the voyage? | No. |
| 18. Did the Second Engineer keep fires under the boilers on 6th, 7th, 9th and 10th July when the level of the water was such as to render it imperative that the fires should be drawn? | Yes. But only 6th, 9th and 10th July. |
| 19. Was this an act of neglect or default or was it incompetence on his part? | Incompetence and neglect. |
| 20. Did such act, default or incompetence cause or conduce to the damage? | Yes. |

G. B. S. ROBERTS.

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